

POČÍTÁME S VODOU 2024

Modro-zelená infrastruktura a kvalita vody

X ROČNÍK
• KONFERENCE

The way Swedish cities use
blue green solutions
for climate adaptation.

Helen Johansson
Green Blue Guide



Helen Johansson

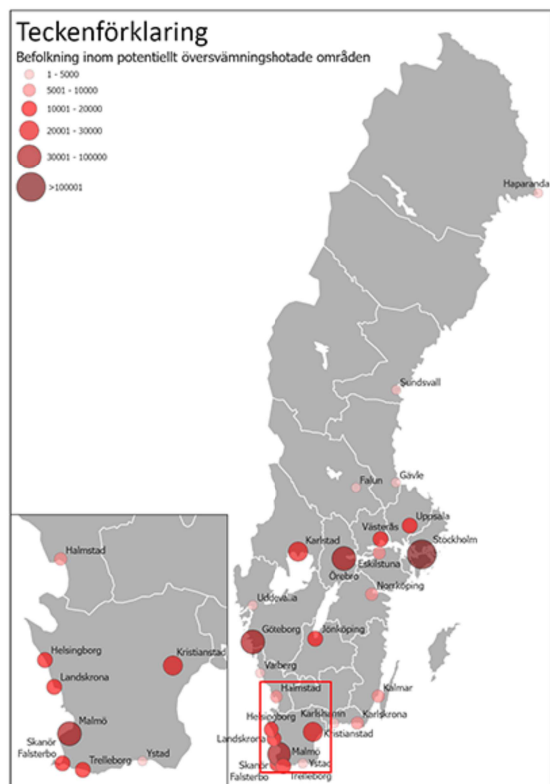
- Owner and founder Green Blue Guide
- Former CEO of Scandinavian Green Roof Institute
- Former Executive Board Member of EFB (European Federation of Green Roofs)
- Trained and experienced gardener
- Nationally authorized tourist guide
- Lecturer and educator
- Consultant and advisor

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www.greenblueguide.se

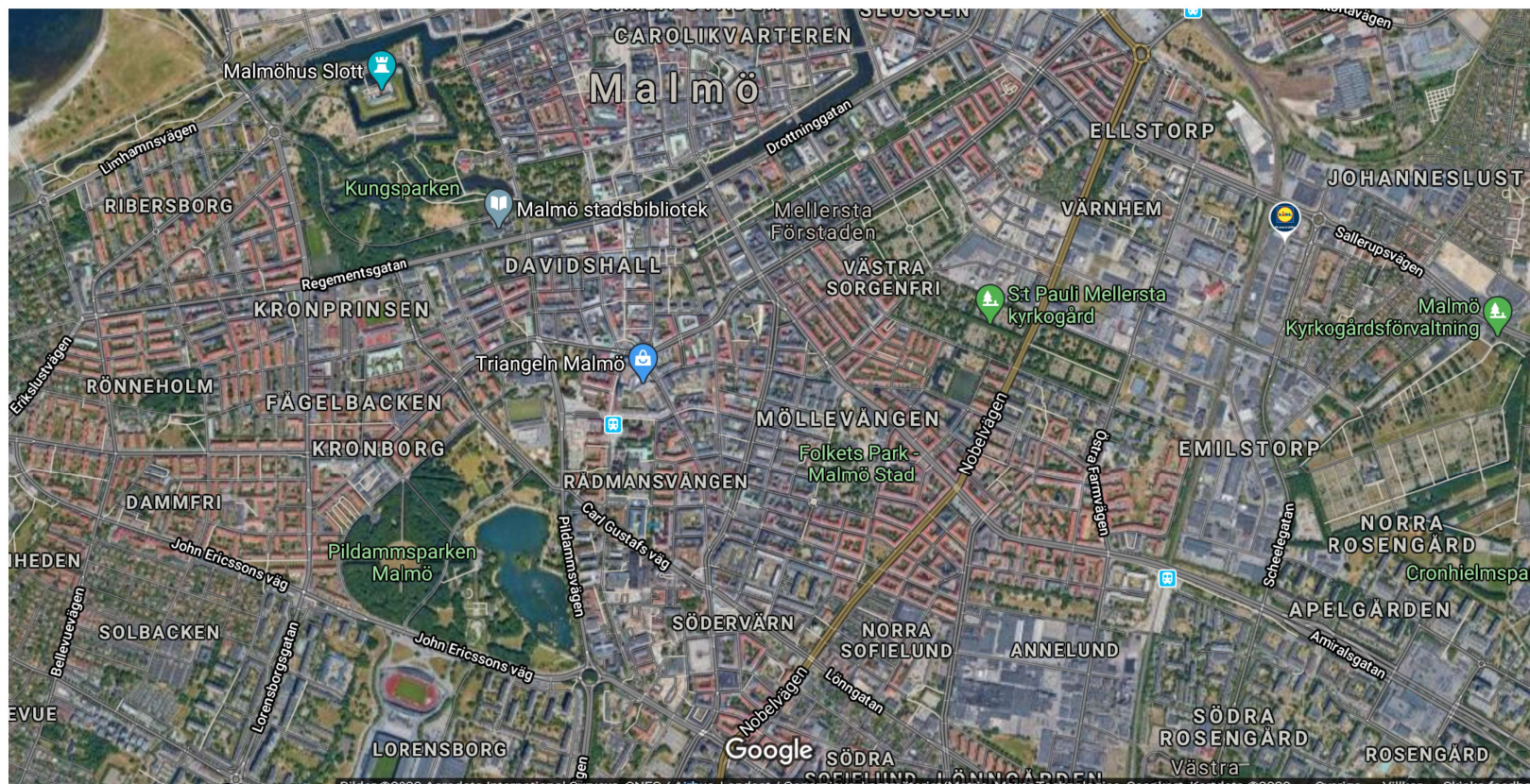


Risk of floodings

Drought periods and extreme heat are becoming more common, while the entire country is getting wetter, with heavy downpours and flooding occurring more frequently.



Could we not just build more parks?

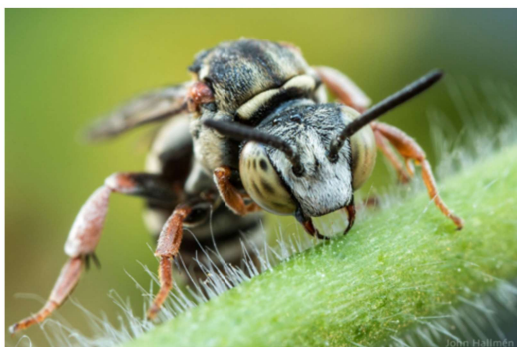


Buildings

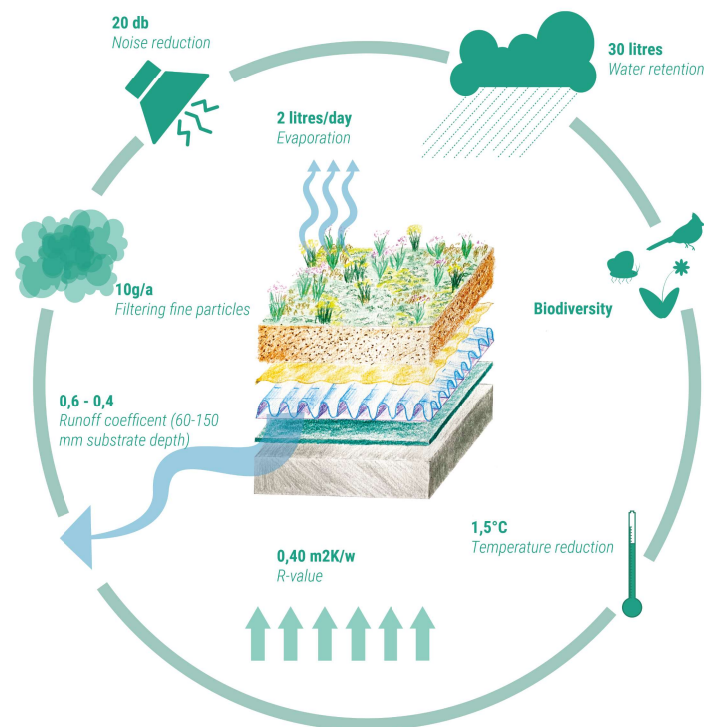


Picture: rainproof.nl

Green roofs



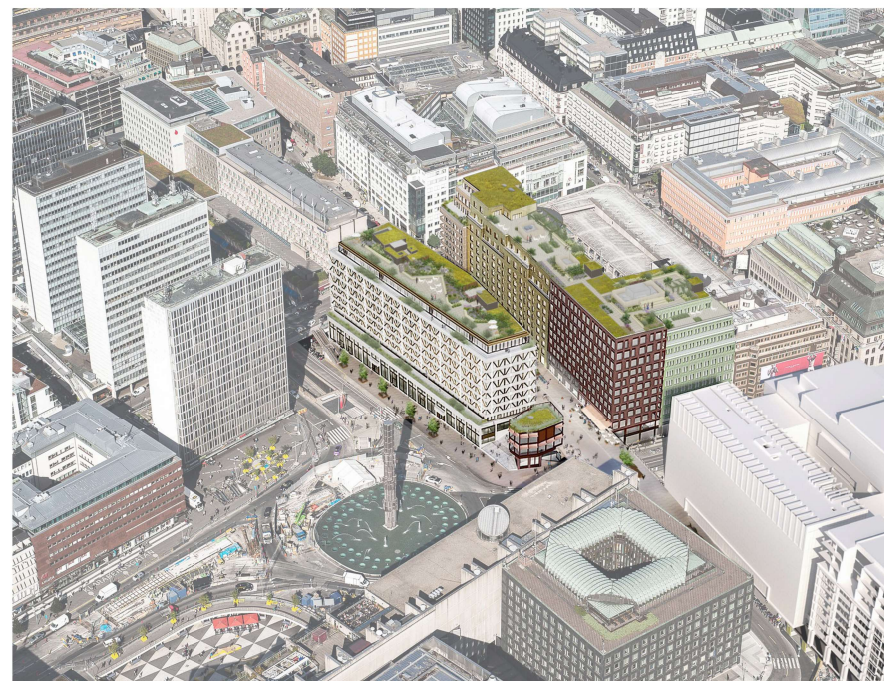
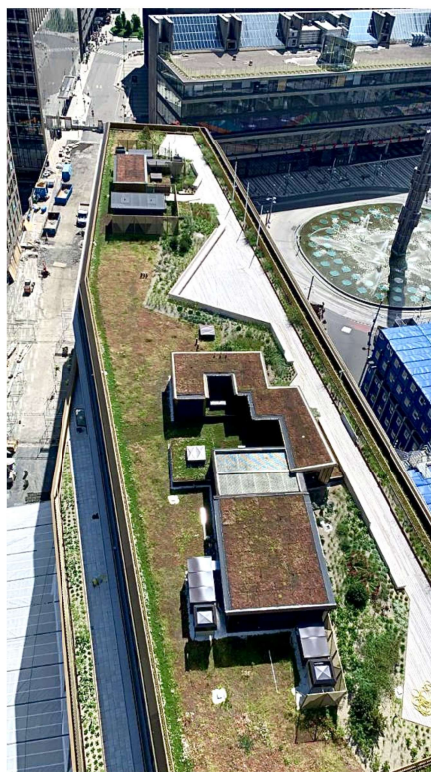
Performance of 1m2 extensive green roof



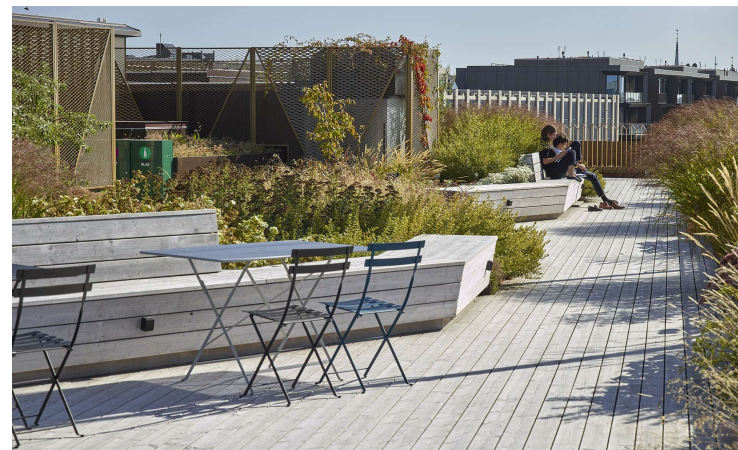
A deeper plant bed holds more water



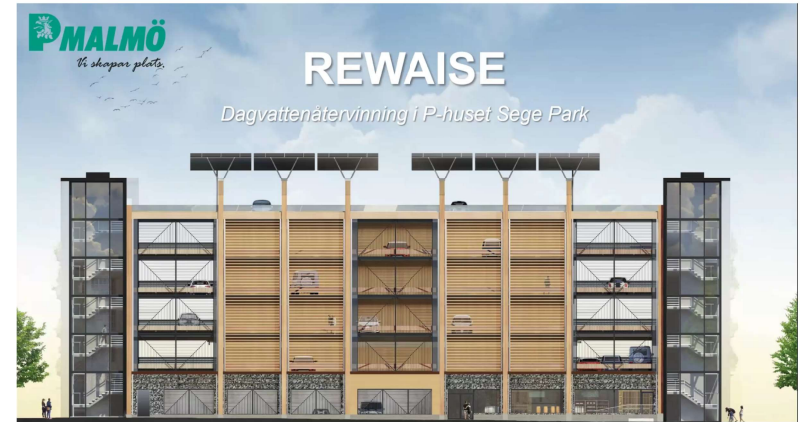
Sergel building, Stockholm



Sergel Building



Green walls, Sege Park, Malmö



Event

PMALMÖ
to shape place

VASYD

REWAISE
RESEARCH AND INNOVATION

This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 101019180

počítáme
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POČÍTÁME S VODOU 2024

Modro-zelená infrastruktura a kvalita vody
Praha, 7. listopadu 2024

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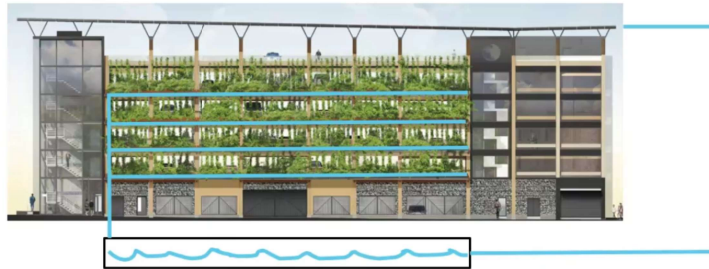
Sege Park

3000 m² takyta

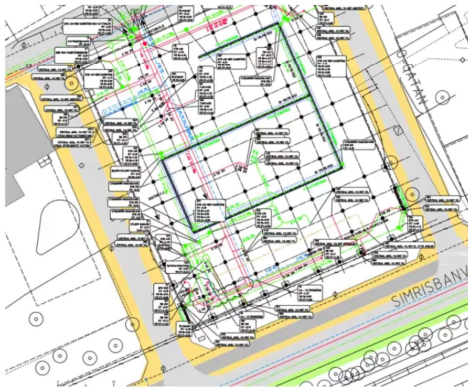


Tillförsel: 1720 m³ vatten/år

1500 m² växtväggar



Behov: 3510 m³ vatten/år



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Picture: rainproof.nl

Courtyards and private lots

Make space for the water

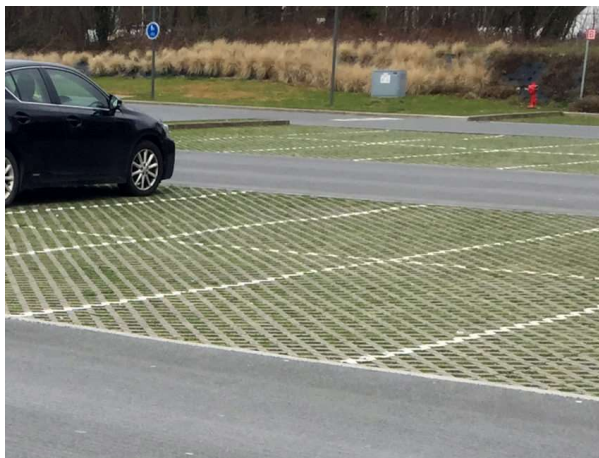


Streets, squares and parking spaces



Picture: rainproof.nl

Permeable surfaces



City trees

3-30-300

*"A rule of thumb for greener, healthier,
and more resilient cities"*

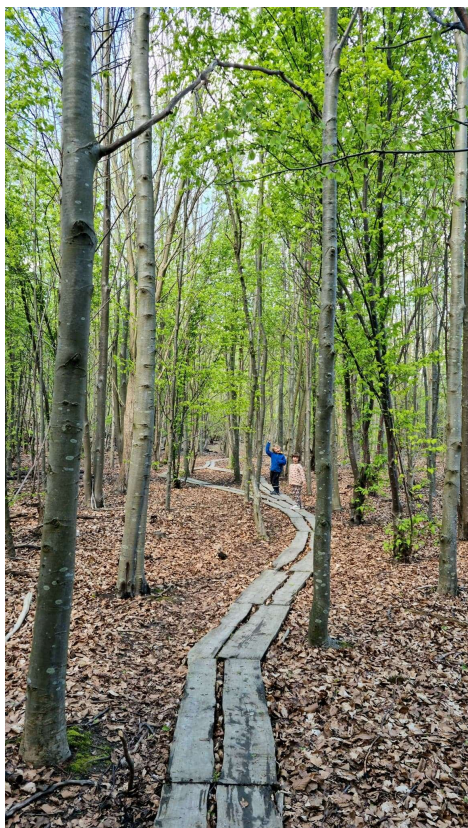
Proposed by:

Cecil C. Konijnendijk Van den Bosch

Professor in Urban Forestry, British Columbia

Nature Based Solution Institute

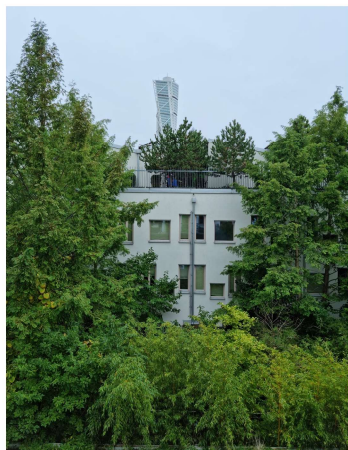
Nbsi.eu



City trees

3-30-300

- Everyone should be able to see at least 3 trees from their home
 - 3 healthy trees, preferably large
 - Diversity of tree species
-
- Increases well-being, reduces stress
 - Enhances concentration abilities



City trees

3-30-300

There should be a minimum of 30% tree canopy cover in each neighbourhood

- 30% provides a good cooling effect in the city

Positive effects on well-being

Atlanta, Georgia over 40%, Toronto 30%

Barcelona, Vancouver, Canberra, Seattle
Target 30% canopy cover.

Malmö today has 13% in average.



City trees

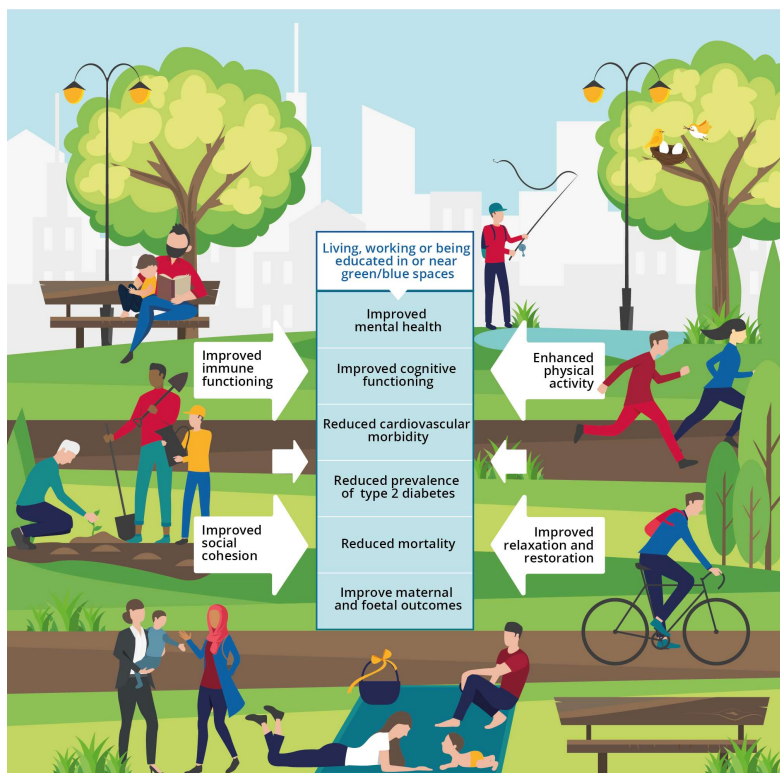
3-30-300

300 metres should be the maximum distance to the nearest high-quality public green

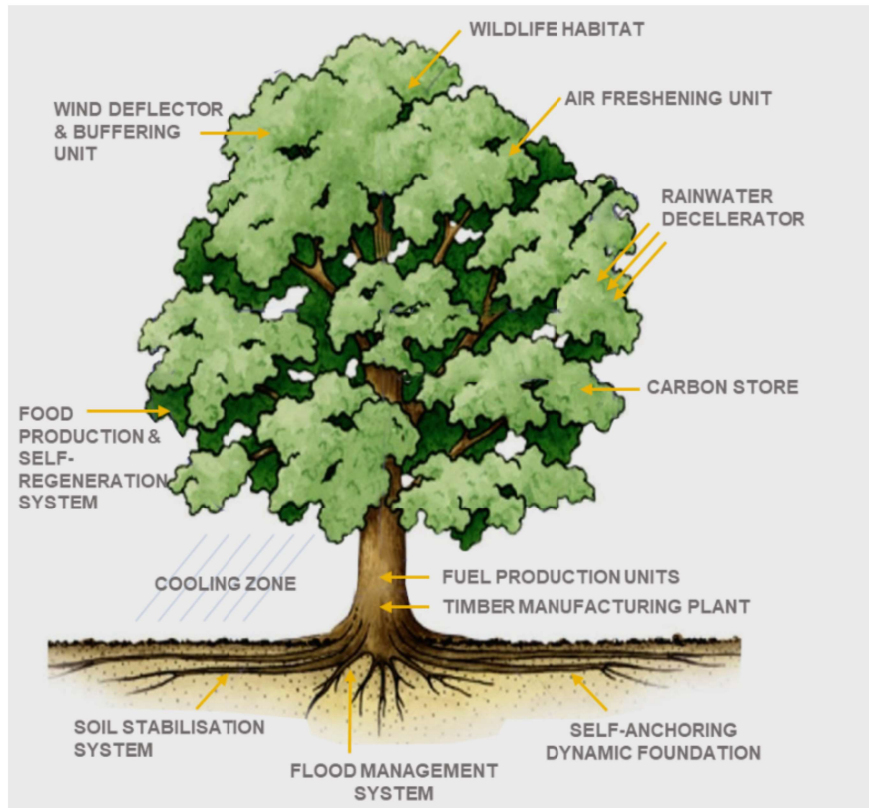
- Pocket parks, tiny forests, urban parks!
All shapes and sizes (preferably over 1 hectare!)

Be creative – every space can become greener than it is today!

Always aim for quality, even in small places



Only thriving trees can deliver ecosystem services



Picture: Reforestation.org



Structural soil

- Simple, flexible and long-term functional construction
- Can be easily incorporated into traditional construction practices
- With a minimum of types of materials that do not require special knowledge in handling and will be available in 50, 100 or more years.



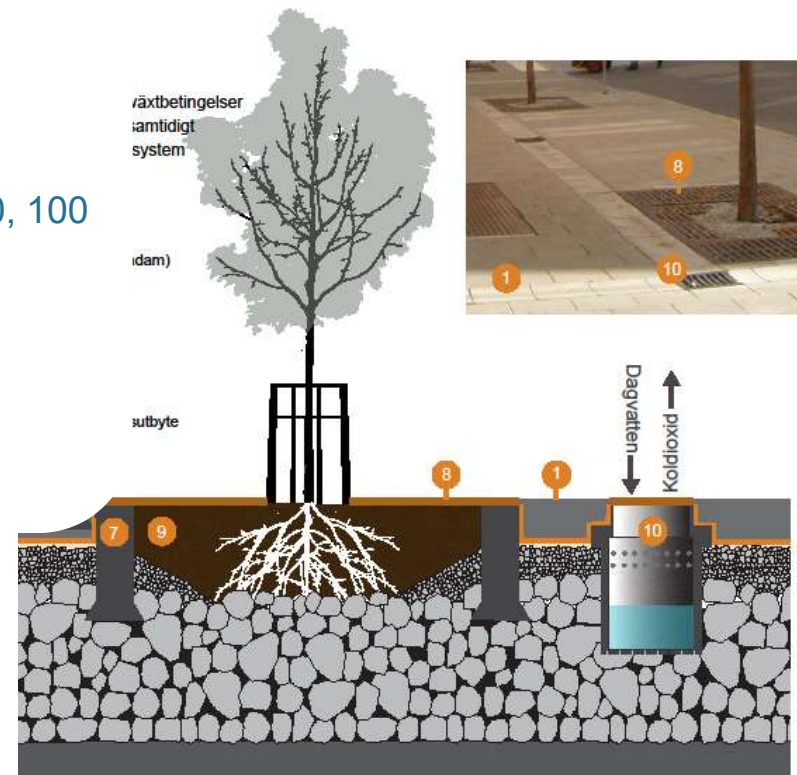
PLANT SUBSTRATE



STRUCTURAL SUBSTRATE

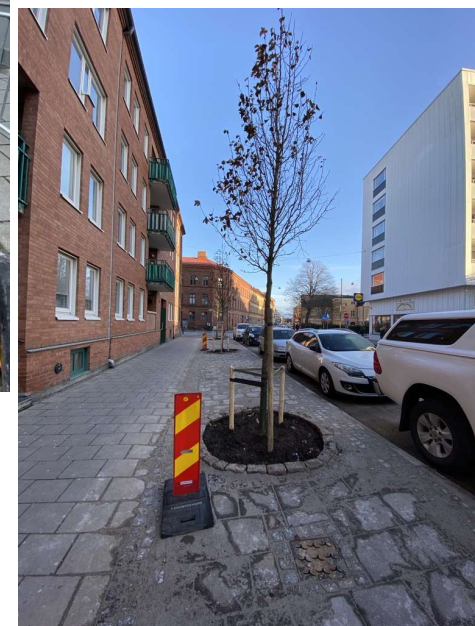
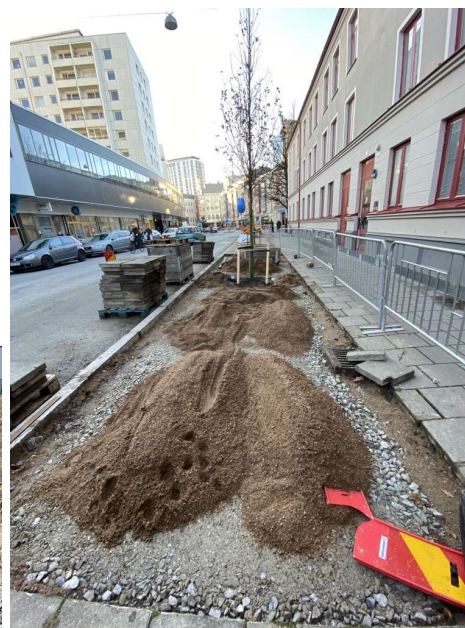


AERIFICATION LAYER

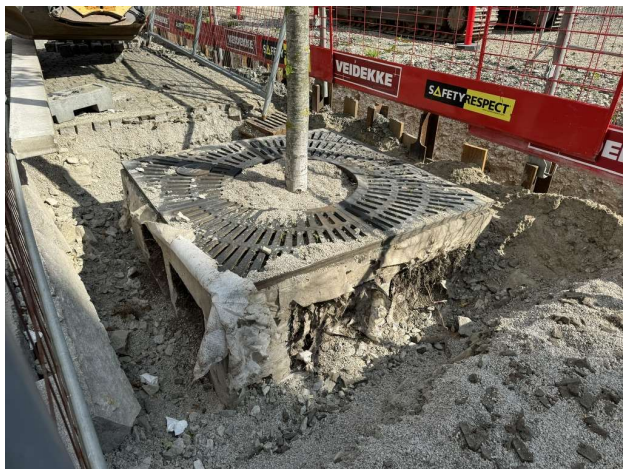


Credit: Stockholm City

Tree planting in structural soil



Moving trees, Lund



Big parks and playgrounds



Picture: rainproof.nl

Ecocity Augustenborg

- Existing residential area
- Remodeled and retrofitted around 2000
- Open stormwater system
- Cloudburst management

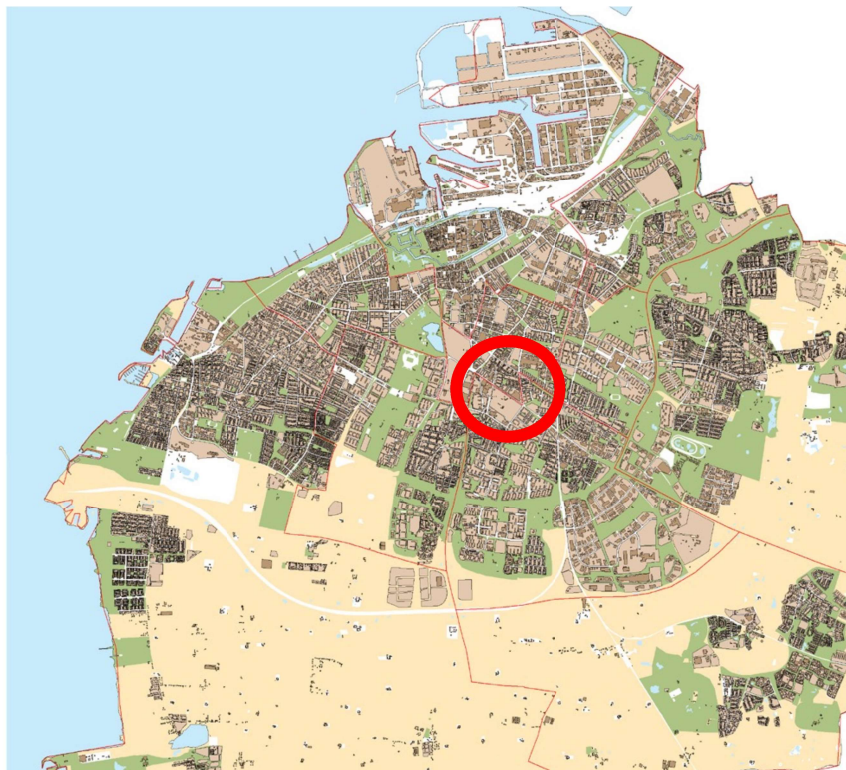


Western Harbour (Bo01)

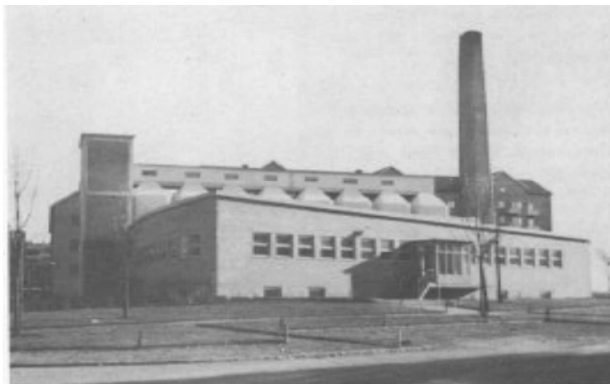
- Converted industrial land
- Built 2000
- Open stormwater system
- Water as art and experimental value



Ecocity Augustenborg, Malmö



Ecocity Augustenborg, Malmö



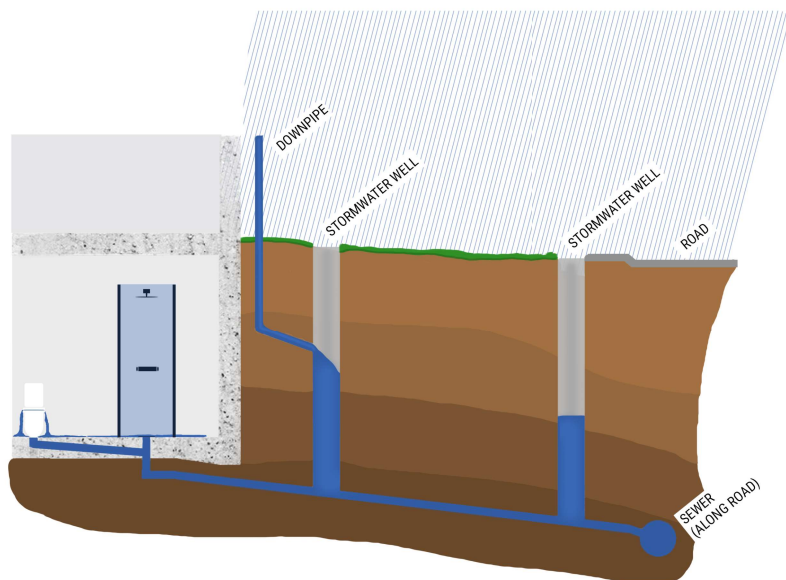
1948 - 1952



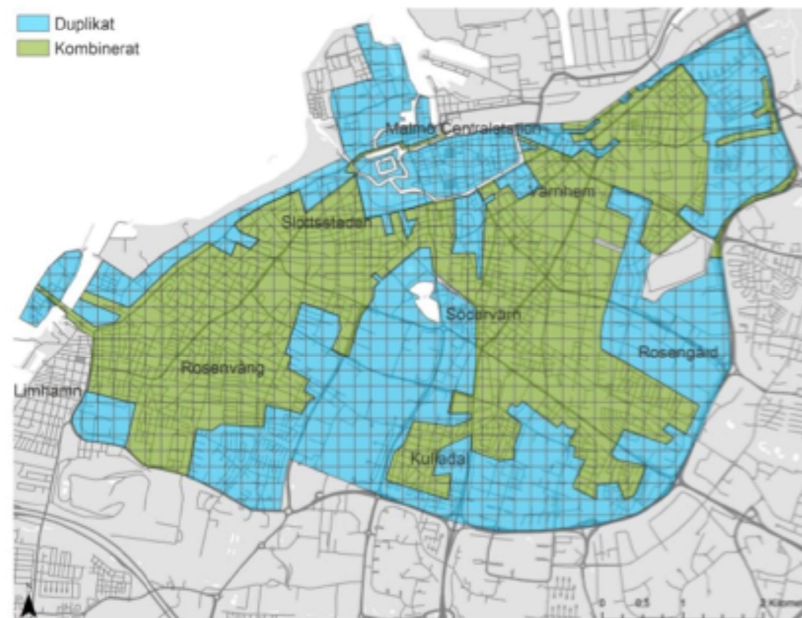
- 1 800 apartments
- Top modern
- Good reputation
- Many social activities

Ecocity Augustenborg

Combined sewer system



Duplicates and combined sewer systems



Ecocity Augustenborg



1990-s

- Very high unemployment
- Rough, unsafe area
- Low standard, needs renovation
- Poverty and social vulnerability
- Floodings in basements and yards



Ecocity Augustenborg

Project start 1997



Ecocity Augustenborg



- Open storm water system
- Green roofs
- Reconstruction of courtyards and outdoor environment



Ecocity Augustenborg



SUDS Sustainable Urban Drainage System

6 km canals

11 ponds

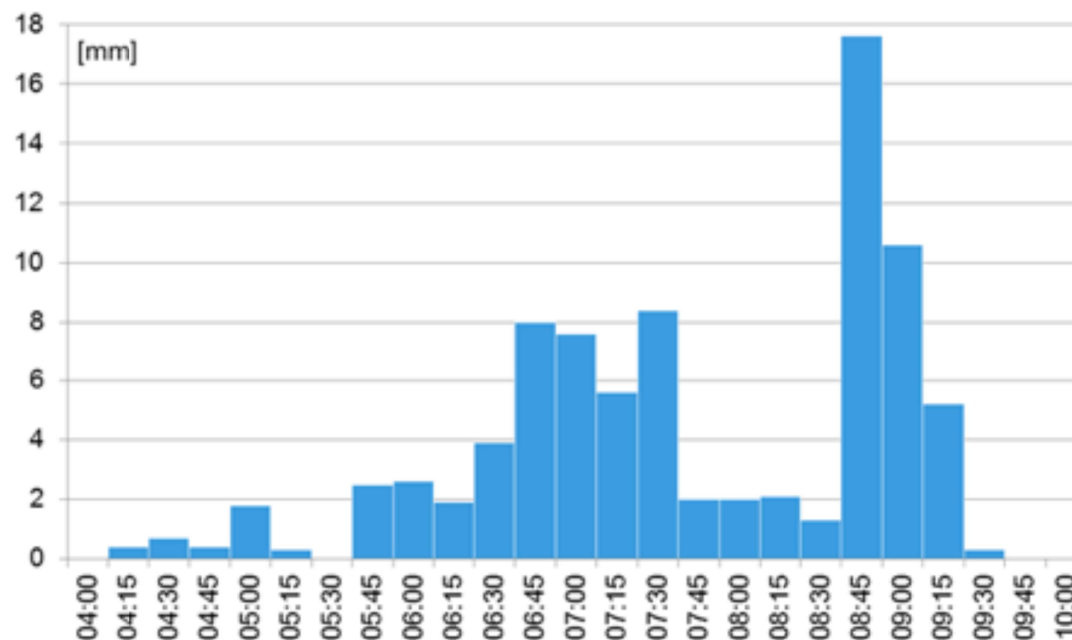
Ecocity Augustenborg



Ecocity Augustenborg



31st August 2014 120 mm rain in 6 hours



Ecocity Augustenborg

No floodings in basements

Water disappeared after 24 hours



Western Harbour (Bo01)

- Contaminated soil
- No possibility for infiltration
- Western part slopes towards Öresund
- Eastern part slopes towards the salt water canal



Western Harbour (Bo01)

* Water



* Green

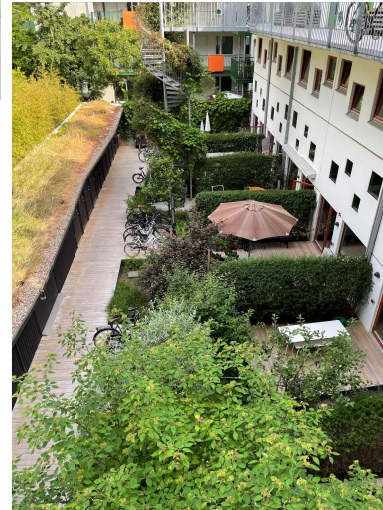
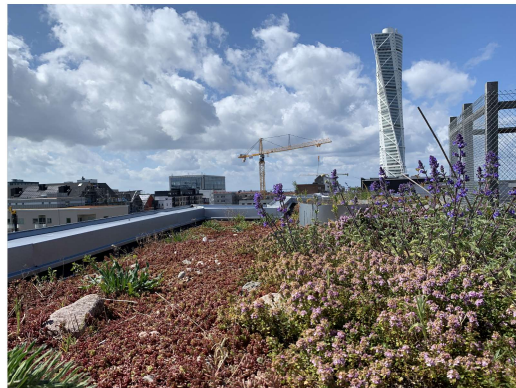


* Stone

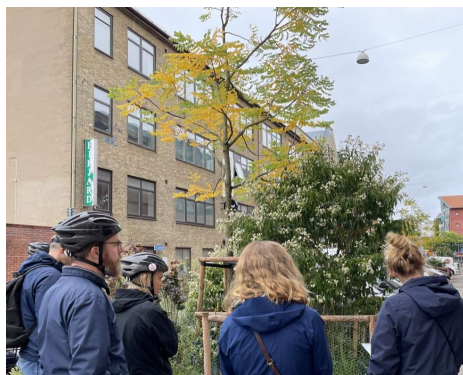
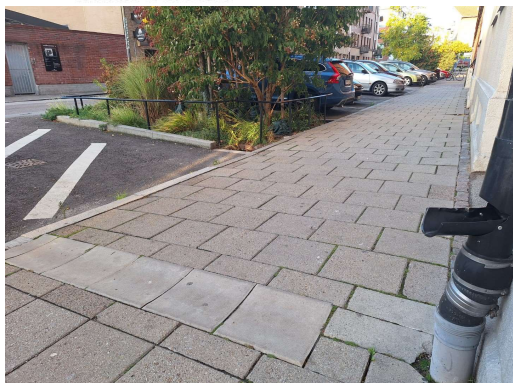
* Art



Western Harbour



Green Cities Europe Award 2024



Sweden's nomination – Grönare Möllan

MEZINÁRODNÍ KONFERENCE

Praha, 7. listopadu 2024

www.pocitamesvodou.cz

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• Děkuji / Thank you 😊

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Hlavní partner



Partneři



Podporující organizace



Mediální partneři



STATNÍ FOND
ŽIVOTNÍHO PROSTŘEDÍ
ČESKÉ REPUBLIKY



Ministerstvo životního prostředí



MINISTERSTVO
PRO MÍSTNÍ
ROZVOJ ČR